

**WHAT IS CLAIMED IS:**

1. An apparatus for forming a beam in a base station, comprising:  
5 a plurality of channel cards for processing and outputting signals to be transmitted to each channel;  
a signal synthesizer/distributor for synthesizing the signals from the channel cards and compensating phases of the signals;  
10 at least one channel controller for controlling beams of the signals from the signal synthesizer/distributor according to a demand of a mobile communication terminal, and outputting the controlled beam signals;  
at least one middle frequency generating block for receiving the signals from the at least one channel controller and synthesizing the signals in each frequency to generate middle frequency signals;  
15 at least one transmitter for converting the middle frequency signals received from the at least one middle frequency generating block into signals in a transmitting band;  
an RFB for amplifying the signals from the at least one transmitter into signals in an output band and controlling phases of transmitting and receiving signals; and  
20 an antenna connection block for switching the amplified signals to corresponding antennas of the RFB so that beams can be generated.

2. An apparatus for forming a beam in a base station, comprising:  
25 a plurality of transmitters for transmitting signals, the signals being controlled in beam form according to the number of users in the base station;  
a coupling block for receiving the signals from the transmitters and transmitting the received signals to an antenna side;  
30 a switching controlling block for receiving the signals from the coupling block and switching the received signals according to the controlled results to output the switched signals;  
an amplifying block for amplifying the signals from said switching controlling block in a certain level and outputting the amplified signals; and  
35 a plurality of matrix buffers for receiving the signals from the amplifying block and switching the received signals to antennas to control beam shapes.